



Air Quality Summary—May 2010



Baton Rouge Area

OZONE

There were six days that exceeded the National Ambient Air Quality Standard (NAAQS) for ozone in the Baton Rouge area during the month of May 2010. See the chart below for detailed information.

Ozone Action Days: May 5, 6, 18 and 25 —Code Orange/USG

PM_{2.5}

There were no exceedances of the NAAQS for PM_{2.5} in the Baton Rouge area during the month of May 2010. Please see the chart on the next page for detailed information on PM_{2.5} levels throughout the state in May.

Other Areas of the State

OZONE

The following is a list of the number of days that exceeded the standard for ozone in areas of the state other than Baton Rouge during the month of May 2010:

New Orleans—2 days, 5/5/10 and 5/6/10

Action Days: May 5, 6, 18 and 25, Code Orange/USG

Lake Charles—1 day, 5/5/10

Action Days: May 18, Code Orange/USG

Lafayette—1 day, 5/4/10

Action Days: May 5 and 6, Code Orange/USG

Shreveport

Action Days: May 18, Code Orange/USG

PM_{2.5}

There was one exceedance of the NAAQS for PM_{2.5} at the Kenner site during the month of May 2010. Please see the chart on the next page for detailed information on PM_{2.5} levels throughout the state in May.

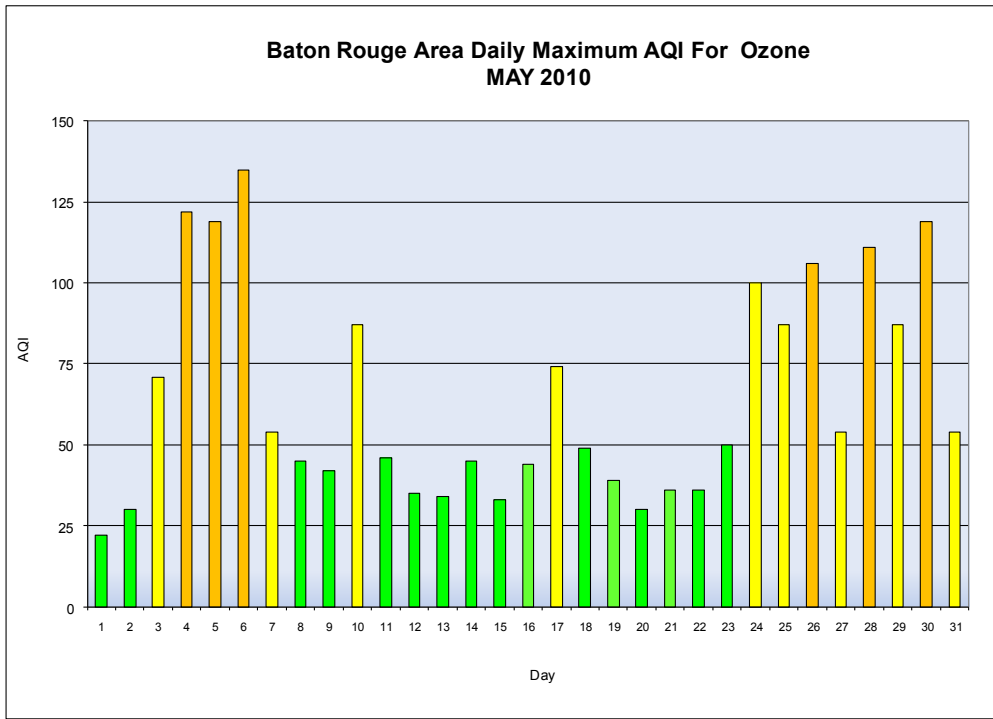
Statewide 8-HR Ozone Readings /AQI Above 75 ppb

DATE	AQI	8-HR OZONE Concentration (ppb)	MONITORING SITE
5/4/10	122	84	LSU
	109	79	Lafayette USGS
	104	77	Bayou Plaquemine
5/5/10	145	93	Kenner
	135	89	Madisonville
	122	84	Vinton
	119	83	New Roads
	119	83	Pride
	116	82	City Park (N.O.)
	116	82	Chalmette Vista
	111	80	French Settlement
	109	79	Carlyss
	104	77	Westlake

DATE	AQI	8-HR OZONE Concentration (ppb)	MONITORING SITE
5/6/10	135	89	Pride
	129	87	Madisonville
	114	81	Kenner
	106	78	Baker
	106	78	French Settlement
	101	76	New Roads
5/26/10	106	78	Grosse Tete
5/28/10	111	30	Carville
5/30/10	119	83	LSU
	106	78	Capitol

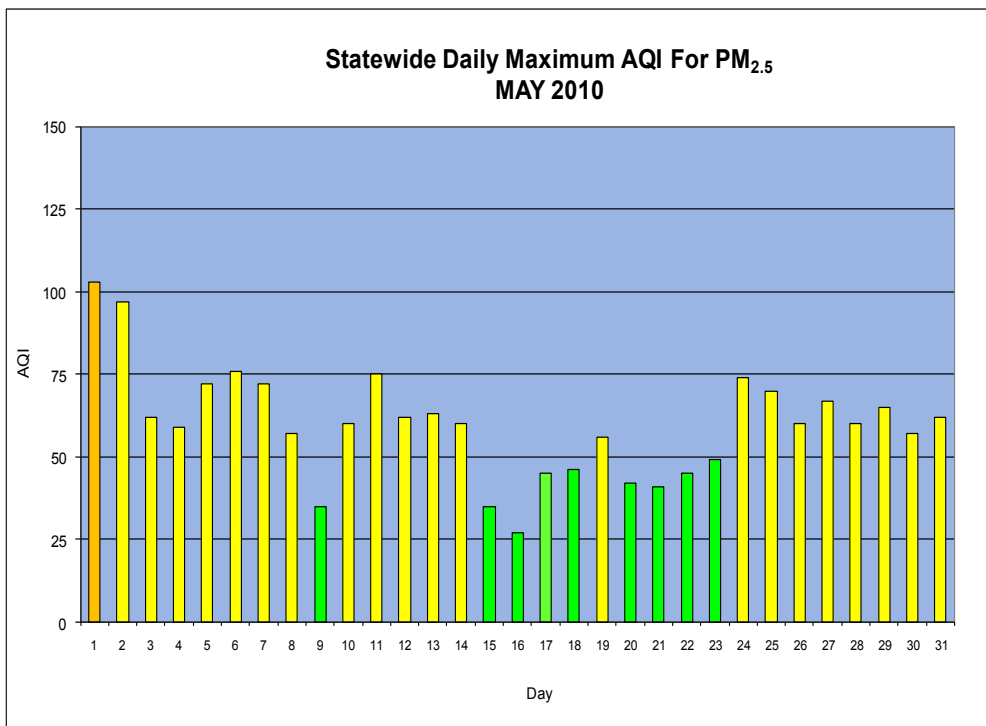


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0-50	Good
51-100	Moderate
101-150	Unhealthy for Sensitive Groups
151-200	Unhealthy
201-300	Very Unhealthy

Statewide High PM _{2.5} 24-Hour Average Readings - May 2010			
DAY	UG/m3	AQI	SITE
1	36.6	103	Kenner
2	34.3	97	Kenner
3	20	62	Port Allen
4	18.8	59	Chalmette Vista
5	23.9	72	Chalmette Vista
6	25.6	76	Chalmette Vista
7	24	72	Port Allen
8	18	57	Chalmette Vista
9	10.9	35	Chalmette Vista
10	19	60	Port Allen
11	25.4	75	Chalmette Vista
12	19.8	62	Chalmette Vista
13	20.3	63	Chalmette Vista
14	19	60	Port Allen
15	10.7	35	Chalmette Vista
16	8.4	27	Chalmette Vista
17	13.8	45	Chalmette Vista
18	14.2	46	Westlake
19	17.7	56	Chalmette Vista
20	12.9	42	Chalmette Vista
21	12.6	41	Chalmette Vista
22	13.9	45	Chalmette Vista
23	15	49	Chalmette Vista
24	24.7	74	Chalmette Vista
25	23.4	70	City Park
26	19	60	Port Allen
27	21.9	67	Port Allen
28	19.1	60	Chalmette Vista
29	21.3	65	Chalmette Vista
30	18	57	Port Allen
31	20.1	62	Shreveport Airport



Baton Rouge Climate Summary—May 2010

**Prepared by: Jay Grymes*
(based on available preliminary data as of June 25, 2010)

May marks the official start of the 2010 Ozone Season, and **"hot"** proved to be the operative word for the month. May 2010's monthly temperature averaged 78.8°F for Metro Airport, 4.8° above the May norm and ranking as the second 'warmest' May for Baton Rouge based on records back to 1905.

Daytime highs reached the 90°s on 21 dates, topping the previous May record of 17 days at or above 90° (recorded in 1962 & 1963). May's highest reading of 95°F was recorded on the 24th, and of the 31 days, May 9th was the only date to average cooler-than-normal. Accumulated Cooling Degree-Day units (CDDs, an index of cooling/air-conditioning demand) for Metro Airport totaled nearly 150% of normal for the month, suggesting that most area residents experienced a summer-like spike in utility bills.

While NWS/HPC Daily Weather Maps confirm a series of frontal events during May, Table 1 indicates that sunshine was abundant throughout the month, largely explaining the month's unusually high temperatures and the record number of days in the 90°s.

Table 1: Average "daylight hours" sky conditions (to 12,000 ft) during May 2010, based on automated ASOS observations from Baton Rouge's Metro Airport.

Sky Condition: Sunrise to Sunset (Sky Coverage)	Clear to Mostly Sunny (0/10ths – 3/10ths)	Partly Cloudy / Partly Sunny (4/10ths – 6/10ths)	Mostly Cloudy to Cloudy (7/10ths – 10/10ths)
No. Days	10	16	5

Daylight hours (official sunrise-to-sunset period, excluding 'Civil Twilight') increased from approximately 13.4 hours (May 1) to 14.0 hours (May 31).

Metro Airport recorded 6.92" of rain during May 2010, 1.58" above the monthly norm -- ranking in the upper 25th-percentile for May totals. Comparison with other sites around the greater metro area (Table 2) shows that Metro AP was the "wettest" of all sites listed. Of the 21 sites included and deemed as having reasonably complete monthly records, 7 reported in excess of 6" of rain for the month; at the other extreme, 5 recorded less than 4" of rain for May. The regional (unweighted) average for these 21 sites is 5.12" -- very near the regional monthly norm -- with a median value of 5.07".

Most sites reported measurable rain on 8 to 10 dates during May, with 1 to 3 days of 1.0" or more -- both numbers very near 30-year averages for Metro AP. May's stormiest period for metro Baton Rouge occurred at mid-month (May 15-19), and included all three dates with rains of 1.0" or more for that location.

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Table 2: May 2010 rainfall for selected rainfall reporting stations across the greater Baton Rouge metro area. (Data are preliminary and provided courtesy of the National Weather Service, the LSU Southern Regional Climate Center, the USGS, and the LSU AgCenter.)

Rainfall-Recording Site	Monthly Rainfall	Monthly DFN	No. Days $\geq 0.01"$	No. Days $\geq 1.00"$
BR - Metro AP	6.92"	+1.58"	10	3
<i>NWS Cooperative Network Sites</i>				
BR - Concord Estates	4.90"	-0.51"	8	2
BR - Sherwood Forest	6.89"	+1.53"	12	2
Denham Springs	4.93"	-0.38"	10	1
Gonzales	6.07"	+1.23"	10	2
Livingston	2.71"	-2.48"	9	0
New Roads	3.90"	-1.45"	8	2
Oaknolia	3.10" (i)	-2.36"	M	M
Port Allen	M	M	M	M
<i>USGS HydroWatch Selected Sites</i>				
Clinton (07377195)	3.81"	--	14	1
Zachary (07377750)	2.72"	--	10	1
Comite nr. Comite (07378000)	4.64"	--	10	2
Prairieville (07380102)	4.11"	--	7	3
Pt. Vincent (07030120)	6.30"	--	6	2
French Settlement (07380200)	5.96"	--	12	2
<i>LSU AgCenter LAIS Automated Stations</i>				
LAIS - Ben Hur Farm	5.76"	--	9	3
LAIS - Burden Plantation	M	--	M	M
LAIS - St. Gabriel Res Sta	6.01"	--	10	3
<i>CoCoRaHS Volunteer Observers</i>				
Old Jefferson 0.9 W (LA-EB-21)	M	--	M	M
Shenandoah 0.8 W (LA-EB-36)	5.07"	--	10	1
Monticello 3.0 ENE (LA-EB-19)	5.56"	--	7	3
Brownfields 5.8 NE (LA-EB-9)	3.31" (i)	--	M	M
Baton Rouge 2.5 E (LA-EB-27)	6.45"	--	8	2
Baton Rouge 2.7 SW (LA-EB-2)	4.78"	--	11	2
Zachary 3.5 WNW (LA-EB-28)	M	--	M	M
LSU Campus (LA-EB-33)	6.40"	--	8	2
WAFB-TV, Downtown BR	3.59"	--	10	2

DFN - Departure-from-Normal (i) - Monthly Report May Be Incomplete
M - Monthly Report Unavailable (e) - Estimated Value
"--" - Normals Not Available

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The Metro AP ASOS platform recorded thunder on 10 days during May, compared to a long-term average of 6.2 days according to the **"Normals, Means and Extremes"** for Baton Rouge (NCDC). May ASOS observations noted 19 days with fog, including "heavy" fog (visibility less than 1/4-mile) on May 15th. Notable smoke and/or haze were detected on four dates: May 1, 8, 15 and 25.

The ASOS reported an average wind speed of 6.1 mph for May 2010, slightly below a 47-year average of 7.5 mph. Daily wind speeds averaged below 5.0 mph on 13 May days, including an 8-day run between May 23-30; winds averaged above 10.0 mph on just three dates: May 1, 2, and 12. Gusts in excess of 20 mph were relatively frequent through the month, occurring on all but four days, with peak gusts of 30 mph or more recorded on 7 dates.

The weekly ***U.S. Drought Monitor*** as of June 1st (Fig. 3) shows the Baton Rouge metro area rated as experiencing "abnormally dry" to "moderate drought" conditions at the close of May, largely due to the early spring dry weather coupled with unusually high temperatures during April and May -- above-normal temperatures and abundant sunshine are key ingredients for elevated evapotranspiration rates. (Of greater concern is the widespread drought over northern and central parishes, as well as the potential for intensifying drought at the local level should June prove to be another dry month.)

The Extended Outlook:

Extended-range outlooks for the summer months, as provided by the NWS Climate Prediction Center (CPC), suggest that seasonal average temperatures are likely to remain near- to above-normal through the coming three months. This long-range temperature outlook is supported, at least in part, by recent trends of warm weather, which lead to drier-than-normal soils -- in summer, dry conditions are generally linked to warmer-than-normal weather. In addition, some long-range indicators hint at repetitive ridging over the southern states through the coming summer, which also contributes to above-average mid-year temperatures. Projections for precipitation during the summer are notoriously unreliable, and uncertainty in the long-range CPC outlooks bear-out this lack of confidence.

That said, the 2010 tropical weather outlook is an ominous one, with some experts calling for a hurricane season that could rank among the five most active in history. A review of numerous university, private-industry, and governmental forecasts for the 2010 Hurricane Season yields a median projection for roughly 18 'named' storms, half as hurricanes. Based on historical trends, the Gulf region should expect one-third of these, which could mean a busy run of months for the Bayou State, further complicated by the potential impacts of an "oil & hurricane" interaction along the southeastern coast.

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Figure 1: May 2010 *Daily Max/Min Temperatures and Precipitation* as recorded by the LSU AgCenter/LAIS Weather Station located at LSU-Ben Hur Farm (Nicholson Drive).

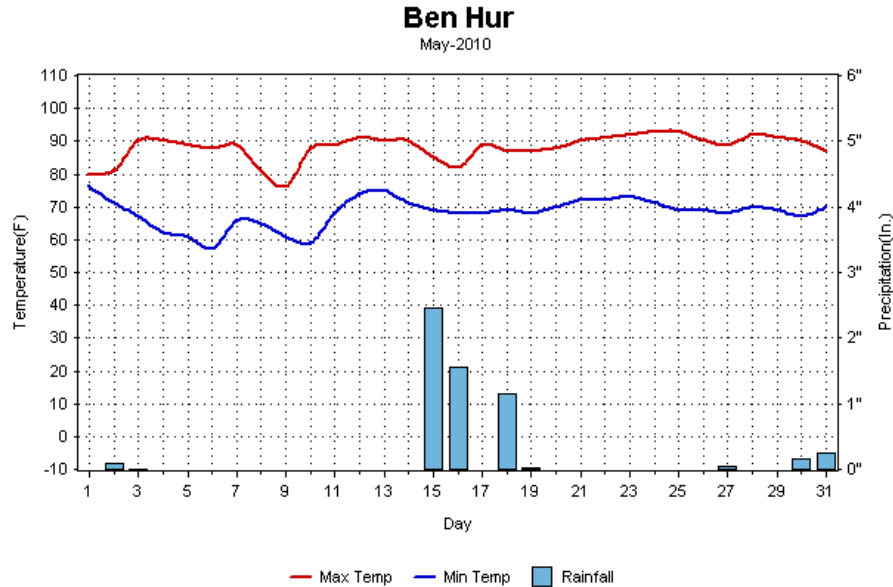
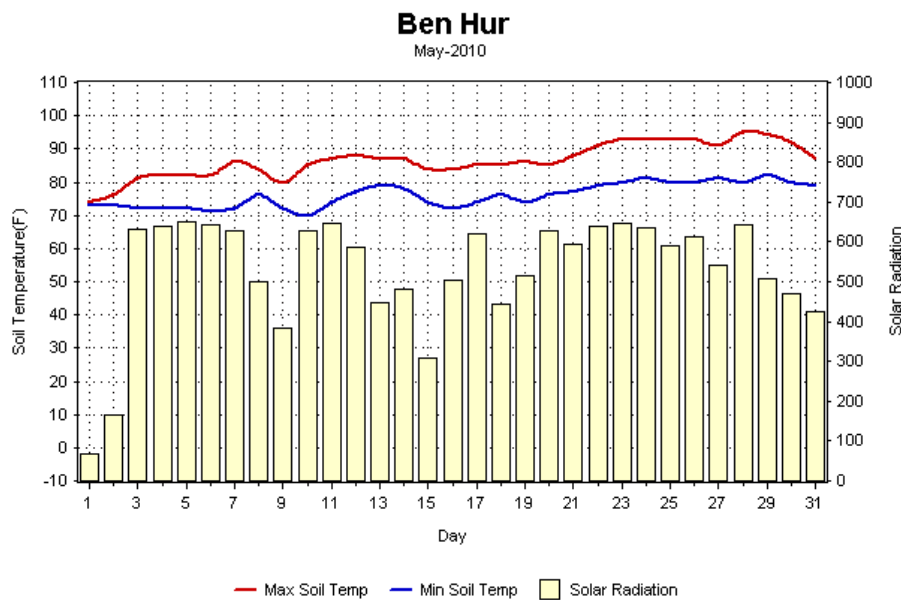


Figure 2: May 2010 *Daily Solar Radiation and Max/Min Soil Temperatures (4 in. depth)* as recorded by the LSU AgCenter/LAIS Weather Station located at LSU-Ben Hur Farm.

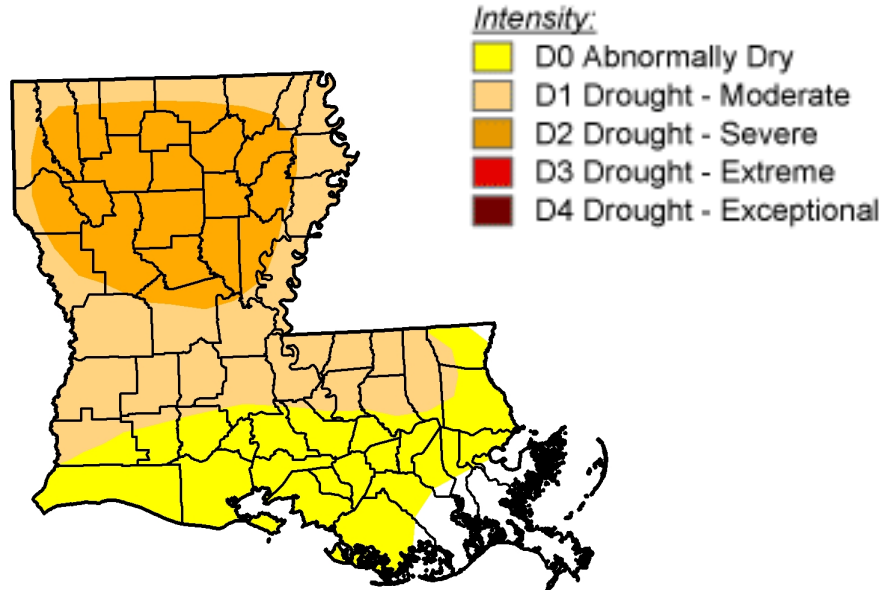


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Figure 3: Weekly **U.S. Drought Monitor** depiction for 1 June 2010.

Source: <http://drought.unl.edu/DM/>



Acknowledgements:

- National Weather Service offices serving Louisiana
- LSU Southern Regional Climate Center (SRCC)
- Louisiana Office of State Climatology (LOSC)
- LSU AgCenter / LAIS Weather Monitoring Program
- U.S. Drought Monitor (<http://drought.unl.edu/DM/>)
- NWS Climate Prediction Center (NWS/CPC)
- NWS Storm Prediction Center (NWS/SPC)
- NWS Hydrometeorological Prediction Center (NWS/HPC)
- NOAA/National Climatic Data Center (NCDC)
- USGS, Louisiana
- WAFB-TV (Ch. 9), Baton Rouge

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